

Peak demand reduction scheme consultation paper

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About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is leading social justice law and policy centre. Established in 1982, we are an independent, non-profit organisation that works with people and communities who are marginalised and facing disadvantage.

PIAC builds a fairer, stronger society by helping to change laws, policies and practices that cause injustice and inequality. Our work combines:

- legal advice and representation, specialising in test cases and strategic casework;
- research, analysis and policy development; and
- advocacy for systems change and public interest outcomes.

Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program works for better regulatory and policy outcomes so people's needs are met by clean, resilient and efficient energy and water systems. We ensure consumer protections and assistance limit disadvantage, and people can make meaningful choices in effective markets without experiencing detriment if they cannot participate. PIAC receives input from a community-based reference group whose members include:

- Affiliated Residential Park Residents Association NSW;
- Anglicare;
- Combined Pensioners and Superannuants Association of NSW;
- Energy and Water Ombudsman NSW;
- Ethnic Communities Council NSW;
- Financial Counsellors Association of NSW;
- NSW Council of Social Service;
- Physical Disability Council of NSW;
- St Vincent de Paul Society of NSW;
- Salvation Army;
- Tenants Union NSW; and
- The Sydney Alliance.

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The Public Interest Advocacy Centre office is located on the land of the Gadigal of the Eora Nation.

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1. Introduction

The Public Interest Advocacy Centre (PIAC) welcomes the opportunity to respond to the Office of Environment and Climate Change (OECC) Peak Demand Reduction Scheme (PDRS) rule change 2 consultation paper (the Paper).

Enabling more dynamic and efficient demand management is crucial to realising a reliable, affordable, and sustainable energy system for NSW. Reducing peak demand decreases the likelihood of power outages, eases pressure on wholesale electricity prices, mitigates the need for expensive network augmentation, increases capacity to integrate renewables, and removes potential barriers to rapid coal generation exit.

We commend the NSW Government for continuing to reform and update the PDRS. Updating existing demand saving activities to ensure they more accurately reflect peak demand savings and deliver positive outcomes for consumers is a welcome and timely improvement. We strongly support the proposal to expand the PDRS through new demand response and demand shifting activities. These new activities are essential to meeting the 2029-30 peak demand reduction target of 10% and fostering a more efficient and effective demand-side market.

2. Changes to existing activities

PIAC supports the proposed improvements to the SYS2 pool pump activity. We understand these changes promote alignment with the Victorian Energy Upgrades program and result in the deemed lifetime of this activity decreasing from twelve to seven years. The OECC should clarify whether this shorter lifetime will affect the overall number of peak reduction certificates (PRCs) issued under SYS2.

We agree with the proposal to add a capacity factor to the WH1 activity for commercial water heaters in order to align with the ESS rule. We encourage the OECC to undertake more detailed modelling to assess whether heat-pump water heaters *not* on controlled load tariffs actually create a material peak demand problem. This modelling should account for the efficiency gains of heat-pump hot water relative to resistive hot water systems and consider interactions with new default time of use tariffs that will be introduced from 1 July 2024.

The efficient functioning of installed heat-pump hot water systems (and what is required to deliver expected outcomes for consumers) should not be undermined by a requirement for them to operate on a controlled load tariff. This is particularly important where there is not a material peak demand issue.

PIAC supports the addition of a demand response capability requirement as part of HVAC1 and HVAC2. Mandating physical demand response capability in all new air conditioners is crucial to reducing peak demand given air conditioners account for approximately a third of total demand on peak days. This requirement reduces barriers to participation in demand response and helps maximise the scope for a large, efficient market for demand response.

We share the view that inbuilt demand response is preferable to retrofitting units with smart air conditioner controllers. Together with appropriate interoperability standards, manufacturer enabled demand response ensures consumers can participate in HVAC3 irrespective of their aggregator.

We do not consider a transitional period to prepare for the new demand response requirements necessary given demand response enabled air conditioners are sufficiently widespread in the market and further delays are likely to jeopardise progress towards peak demand reduction targets.

3. Commercial and industrial demand response

3.1 Wholesale annual response mechanism (WARM)

PIAC welcomes the proposal to use the WARM to leverage participation in the Wholesale Demand Response Mechanism (WDRM). The financial incentive for capacity availability offered through the WARM helps address issues related to low participation in years when spot prices may not be high enough for demand response capacity to be delivered through the WDRM.

We support the proposal to verify demand response capacity using dispatch data either as part of an actual response to high prices or a dispatch test. However, we are concerned that accredited certificate providers (ACPs), where they are also acting in the capacity of an aggregator, may lack appropriate incentives to maintain dispatch test integrity due to their interest in certificate creation.

We encourage the OECC to consider whether incentives would be better aligned through assigning the role of certificate creation and dispatch verification to different parties. We also seek further perspective from the OECC and others as to what confidence stakeholders can have that a dispatch test conducted by an ACP is sufficiently rigorous and associated data is robust.

We support the exclusion of Reliability and Emergency Reserve Trader (RERT) and firming Long Term Energy Service Agreement (LTESA) loads from the PDRS.

4. Residential demand shifting

4.1 BESS1 – Install a new BTM residential battery energy storage system

PIAC considers the implementation requirements broadly appropriate and strongly supports efforts to expand capacity for demand shifting through incentivising the adoption of residential battery energy storage systems. However, we do not consider the OECC has sufficiently demonstrated that BESS1 will contribute to demand shifting given the activity does not actually involve participation in any demand response programs such as BESS2. In other words, the capacity to shift demand does not on its own guarantee that such shifts will occur, and (assuming they do) are consistent with efforts to reduce peak demand. This creates a potential risk that assumed demand shifting (and peak demand reduction) associated with the created certificates, is not actually delivered.

BESS1 is more likely to reduce peak demand if it is more meaningfully linked to mechanisms that incentivise the dispatch of assumed demand shifting capacity. To ensure BESS1 contributes to peak demand reduction its design and interaction with BESS2 should be modelled on the relationship between the WARM and the WDRM. That is, the financial incentive to expand demand shifting capacity under BESS1 could be made contingent on enrolment in BESS2 (or a similar accredited demand shifting program) to ensure this capacity is utilised in a manner that reduces peak demand.

This could be achieved through requiring participants to enrol in BESS2 (or a similar accredited demand shifting program) to secure the release of PRCs under BESS1. This may require changes to how upfront certificates under BESS1 are assigned – for instance, reducing the certificates generated upfront, or generating a proportion of annual BESS1 certificates over the assumed life of the battery.

Implementation requirements could be further improved by ensuring the installer accreditation system and approved battery list progresses reforms initiated under the ESB's Integration of consumer energy resources (CER) and flexible demand workstream¹ and the AEMC's Review into CER technical standards². In particular, efforts should be directed at ensuring approved batteries are:

- installed compliant with all required standards (including standards related to accompanying inverters),
- configured to be fully open-interoperable, and
- capable of responding to cost reflective tariffs, real-time electricity wholesale market conditions, and providing other power system services.

The requirement for installers to register batteries on AEMO's Distributed Energy Resource (DER) Register should also be used as an opportunity to update the register with the required data to enable flexible connections and reduce the significant rate of non-compliance with CER technical standards³.

5. Residential demand response

5.1 BESS2 – Sign a BTM residential battery energy storage system up to a demand response contract

We recommend introducing a mechanism to incentivise participation in BESS2 such that demand shifting capacity contributes to reducing peak demand. Without such a mechanism, BESS2 may fail to achieve desired levels of uptake due to consumer reluctance to relinquish control of their assets. Further research into how consumers might use or want to use these products and services is necessary to overcome these barriers⁴.

¹ See ESB [Integration of CER and flexible demand](#).

² See AEMC [Review into CER technical standards – Final Report](#).

³ Ibid, p. iii, para. 16.

⁴ See ECA [Supporting demand flexibility in the energy transition](#) for an overview of incentives and enablers to drive participation in such schemes.

5.2 HVAC3 – Sign a residential air conditioner up to a demand response contract

We consider the proposed requirements relating to the duration and temperature limits under HVAC3 reasonable. The maximum set-point increase of 4°C and temperature of 26°C for a two-hour period each summer appropriately balances amenity needs and incentives for broad-based participation. Should winter peaks become a problem, the OECC should consider expanding HVAC3 to include a heating demand response mechanism for reverse cycle air conditioners.

To ensure consumers get the best outcomes, we recommend introducing a mechanism to incentivise participation in HVAC3 akin to the BESS2 proposal outlined above. The absence of a requirement to participate in a demand response program as part of HVAC1 may undermine efforts to reduce peak demand, particularly in cases where the new high-efficiency air conditioner represents additional load rather than a replacement unit.

6. Areas for future consideration

PIAC acknowledges the barriers to extending demand response to pool pumps, electric vehicle charging, and commercial and industrial batteries outlined in the Paper. We accept the proposal to delay introducing these activities to the PDRS until the technological and/or financial viability of pursuing demand response for these activities improves and sufficient data is available to set appropriate baselines. We encourage the OECC to revisit these areas as soon as practicable and continue updating the PDRS to support the transition to a renewable energy system.

PIAC supports further measures to reform and expand the PDRS and ESS. These mechanisms have a crucial role to play in assisting the efficient electrification of NSW households and addressing equity and affordability of energy in NSW. We would welcome opportunities to discuss further opportunities for consumer-focussed reform with the OECC.

7. Further engagement

PIAC would welcome the opportunity to discuss these matters further with the OECC and other stakeholders. If you have any queries about this submission or would like more information about our advocacy and research work, please contact Jan Kucic-Riker, Policy Officer, Energy and Water at jkucicriker@piac.asn.au.